MARKET PATTERNS for U.S. RICE, 1971-72

ERS-528
U.S. Department of Agriculture
Economic Research Service

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

ABSTRACT

Rice distribution data for the 1971-72 marketing year are summarized from a mail survey of all known rice milling and repackaging firms in the United States. Data from previous such studies are used in making comparisons with other years, particularly 1969-70. Data shown include amounts of rice distributed for direct food use by States, regions, and territories, broken down by size of package, type of grain, and specialty rice. Quantities of rice shipped to processors for use in principal products are shown, as well as trends in domestic distribution and use of rice and their relationship to certain factors. Government distribution to both civilian and military populations is shown. Also, there is related information such as percentage of rice packaged in consumer-sized packages and labeled under another firm's brand name and percentage of enriched rice distributed for direct food use in the United States and territories.

Keywords: Rice, distribution by size, domestic market, trends, packaging.

PREFACE

This report on distribution patterns of milled rice in the United States and its territories updates previous studies in 1959, 1964, 1969, and 1972. These reports provide information on the changing economic structure of the rice industry and aid the U.S. Department of Agriculture in its research on efficient location patterns for rice marketing facilities and on international trade policies in rice. They will also help rice producers, millers, and packagers to plan marketing and related decisions fundamental to growth of a sound, viable industry.

John M. Musgrave, Economist, Economic Research Service, USDA, ran the computer programs which edited the rice miller and repackager questionnaires and prepared survey data for summarization in the tables. Appreciation is expressed to the Rice Millers' Association and the Rice Council for their support of the study. Special appreciation is expressed to the rice millers and repackagers whose cooperation made the study possible and enabled complete coverage of rice distribution for the marketing year 1971-72.

Washington, D.C. 20250 August 1973

CONTENTS

	Page
Summary	vi
Background and methodology	1
U.S. rice distribution	2
Distribution of rice for direct food use, by regions and States	3
Package information	3
Specialty rice	4
Type of rice	4
Enriched rice	4
Government distribution	4
Distribution of rice for processing use	5
Distribution of rice to territories	5
Exports	5
Tables	6

SUMMARY

Rice distributed in the United States in the 1971-72 marketing year totaled 1 percent less than in 1969-70, a decline of about 265,800 hundredweight. Although the longrun trend has been up, this survey indicates a possible leveling off in domestic demand for rice for all uses.

Annual per capita consumption of rice for food declined an average of 0.8 pound between 1966-69 and 1969-72. However, an increase shown in rice distributed for food use in 1971-72 over 1969-70, the previous survey year, indicates a possible resumption of the upward trend in per capita use. Processed food use increased more than enough to offset the decline in amount distributed for direct food use. But there was a sharp decline in rice used for beer (549,200 hundredweight), probably caused by the lack of rice available for beer use at attractive prices. This decline was significant in lowering the total amount distributed.

Rice millers accounted for over 90 percent of the rice shipments to all domestic outlets combined: Civilian direct food use, food processors, and beer manufacturers. Distribution by the Department of Agriculture declined slightly.

Nearly half the rice distributed in the United States for direct food use (excluding Government) was in consumer packages of 5 pounds and less in 1971-72. Over 18 percent was specialty rice.

Four U.S. regions, accounting for about 56 percent of the population, took more than 77 percent of the rice distributed for direct food use in 1971-72. In order of importance, they were the Middle Atlantic, Pacific, South Atlantic, and West South Central regions. The West North Central Region showed the greatest relative decline, dropping from sixth to eighth place in per capita rice distribution.

California, New York, New Jersey, Louisiana, and Florida ranked in that order in total rice distributed, accounting for 50 percent of the 1971-72 distribution.

Long grain rice continued to increase in popularity and accounted for over 67 percent of the rice distributed for direct food use. Long and medium grain combined accounted for over 97 percent.

The Department of Defense distributed 159,644 hundredweight of rice in 1971-72, much below the 573,735 hundredweight distributed in 1969-70. This was largely because no purchases were made for overseas indigenous feeding connected with the military.

Total shipments to U.S. territories increased, as did per capita distribution. Short and medium grain accounted for nearly 97 percent of the total rice distributed in 1971-72. Short grain was most popular, accounting for 73 percent.

MARKET PATTERNS FOR U.S. RICE, 1971-72

by

J. C. Eiland and Theo. F. Moriak
Agricultural Economists
Commodity Economics Division
Economic Research Service

BACKGROUND AND METHODOLOGY

Rice production in the United States has trended up, more than doubling in the last 20 years. Although most rice is exported, domestic distribution and consumption have trended up and are important to a viable rice industry. Such factors as price, ethnic origin of consumers, and changes in tastes, eating habits, food preparation methods, and menus may be important in affecting consumer demand for rice.

This report provides information on the commercial distribution of U.S. rice by market location during the 1971-72 marketing year (August 1 to July 31). Such information is important in an orderly and sustained market development effort. Data are from a mail survey of 37 milling firms and 13 repackaging firms (all known operating firms) conducted in late 1972 and early 1973. Supplementary data on rice distributed by the Federal Government were obtained from Government sources.

This study shows the patterns of rice distribution by type of outlet. For that distributed to wholesale, retail, and institutional outlets for direct food use, information on package size, type of grain, quantity of specialty rice, 1/ and related information was developed by States and regions of the United States and for the territories.

Data for 1971-72 are compared with data for 1969-70 and, in certain cases, with earlier data. 2/ These comparisons may serve as a basis for evaluating the changing pattern of rice distribution and provide insights into trends occurring in distribution and consumption.

1/ Specialty rice includes parboiled, precooked, brown, and other than regularly milled rice. Rice mixes, spiced rice, and rice which has anything added other than enrichment ingredients is processed rice and is covered separately in this report.

2/ Eiland, J. C. and Moriak, Theo. F., Distribution Patterns for U.S. Rice, 1969-70, U.S. Dept. Agr., ERS-484, May 1972.

U.S. RICE DISTRIBUTION 3/

The volume of milled rice distributed for all uses by the civilian population in the United States was 20,373,100 hundredweight in 1971-72 compared with 20,638,900 hundredweight in 1969-70, a decline of about 1 percent (table 1). During this period, distribution changed as follows:

Direct food use	down 1.4 percent
Processed foods	up 15.4 percent
Total food use	up 1.8 percent
Beer manufacturing	down 11.9 percent
Total use	down 1.3 percent

The quantity distributed to all food uses rose 283,400 hundredweight, while the quantity distributed to breweries declined 549,200 hundredweight. These changes shifted the share of the total distribution for all civilian food uses from 78 to 80 percent. Direct food use accounted for 63 percent of the 1971-72 distribution.

Per capita food consumption of rice (excluding beer) in the United States has recently declined slightly. Average annual consumption was 7.1 pounds per capita during the 3-year period August 1969-July 1972, down 0.8 pound from the 1966-69 average (table 2). 4/ This would indicate a decline in average total rice consumption for food of a million hundredweight annually between these 3-year periods. However, between 1969-70 and 1971-72, the first and last years of the latter 3-year period, rice distribution survey data showed an increase in rice distributed for food use, indicating a possible resumption of the long-run upward trend in per capita food rice consumption.

Rice millers distributed the bulk of the rice in 1971-72. The following quantities were distributed by mills, repackagers, and the Government for use by civilian population within the United States:

Use and distributor	1,000 cwt.
Direct food:	
Mills	10,610.9
Repackagers	1,422.9
Government	802.0
Processed food:	
Mills and repackagers	3,455.3
Beer:	
Mills	4,082.0
Total	20,373.1

3/ Does not include rice distributed to territories or any rice distributed by the military.

4/ These data are from Food Grain Statistics Through 1967, and Supplement, U.S. Dept. Agr., Bul. No. 423; and Food Consumption, Price Expenditures and Supplements, U.S. Dept. Agr., Econ. Res. Serv.

Most of the rice distributed to food processors was shipped from mills and the remainder from repackaging plants. Some of the rice distributed for direct food use was converted from regular milled rice to specialty rice (precooked) by repackagers. In this study, rice converted by repackagers is treated as rice for direct food use and not as rice for processed food use.

DISTRIBUTION OF RICE FOR DIRECT FOOD USE, BY REGIONS AND STATES 5/

Four regions of the United States, with about 56 percent of the civilian population, accounted for over 77 percent of the rice distributed in 1971-72--slightly less than 2 years earlier (table 3). In order of their rank in total distribution in 1971-72, they are the Middle Atlantic, Pacific, South Atlantic, and West South Central regions. 6/ These four regions also ranked highest in per capita distribution of rice.

Five regions increased their shares of U.S. total rice distribution and five--but not the same five--increased their per capita distribution. However, per capita distribution declined nationally between 1969-70 and 1971-72.

California, New York, New Jersey, Louisiana, and Florida--the top five States in that order--accounted for 50 percent of the rice distributed in 1971-72 (table 4). The top five States have consistently accounted for about 50 percent of the rice distributed, as these studies have shown. However, the States falling in the top five vary, as well as the ranking of the top five. Florida, instead of Texas, was among the top five in 1971-72.

Package Information

In 1971-72, slightly less than half the rice distributed--excluding Government distribution--for direct food use by the civilian population was in packages of 5 pounds and less. Over 21 percent was shipped in containers of 5.1 through 25 pounds. The remainder was shipped in containers larger than 25 pounds and in bulk (tables 4 and 5).

Of the six regions showing an increase in rice distributed for direct food use in 1971-72, none showed a decline in quantity distributed in packages of 5 pounds and under (table 5).

Of the 1,728,603 hundredweight of rice that repackagers reported receiving from mills, 11.3 percent was packaged by the mills under the repackager's label. Nearly 27 percent of the rice shipped by mills and repackagers to wholesale, retail, and institutional outlets in the United States in packages of 25 pounds and less was packaged under another firm's brand name.

5/ Includes only rice distributed to wholesale, retail, and institutional outlets and rice distributed by USDA's Food and Nutrition Service to schools, institutions, and for welfare, all of which was for consumption by the civilian domestic population.

6/ See table 4 for a listing of States in each region of the United States.

Specialty Rice

More than 18 percent of the rice distributed by mills and repackagers for direct food use in 1971-72 was specialty rice (table 4). This is the same as 2 years earlier and up from 16 percent in 1966-67.

Specialty rice as a percentage of all rice distributed for direct food use varied from 1 percent in Hawaii to 100 percent in Alaska. States and regions with lower per capita distribution tended to have higher percentages of specialty rice.

Mills and repackagers reported shipments of 2,358,700 hundredweight of specialty rice to the States and territories in 1971-72. Over half of it was parboiled and over one-third was precooked. Over 96 percent of all specialty rice was long grain rice (table 6).

Type of Rice

Long and medium grain rice continue to be most popular in commercial distribution for direct food use. These types accounted for over 97 percent of such rice distribution in the United States in 1971-72, up from 95 percent in 1969-70. Long grain rice continued to increase in popularity, rising from 61.3 to 67.3 percent of the total distributed for direct food use. Long grain was the most popular in all regions in 1971-72. Medium grain had been most popular in the West North Central and the Pacific regions in 1969-70 (table 5).

Enriched Rice

Some rice is enriched by adding thiamin, niacin, and iron during the milling process. Riboflavin, vitamin D, and calcium may or may not be added in enriched rice.

Over 24 percent of the rice shipped by mills and repackagers to United States and territorial wholesale, retail, and institutional outlets (direct food use) was enriched. Of the total rice shipped, 9 percent had riboflavin added. These percentages are up slightly from 1969-70.

Government Distribution

Government distribution of rice was handled by the Departments of Agriculture and Defense. Neither of these distributions include rice purchased from commercial sources for supplying military commissaries in the United States or commissaries operated by nonmilitary Government agencies abroad. Both of these outlets purchase on the open market and therefore their distribution is presumed to be included in commercial distribution for direct food use, shown in table 4.

USDA rice distribution to schools, institutions, and welfare agencies in the United States declined from 831,001 hundredweight in 1969-70 to 802,001 in 1971-72 (table 7). Distribution to territories for these uses declined by about 9,100 hundredweight. Total distribution declined by over 3 percent. Sixty-three percent of this rice went to welfare agencies, 29 percent to schools, and 8 percent to institutions in 1971-72.

The Department of Defense distributed 159,644 hundredweight of rice in 1971-72, considerably less than the 573,735 hundredweight distributed in 1969-70 (table 8). Specification purchases for Armed Forces feeding were down over 58 percent and no purchases were made for overseas indigenous feeding connected with the military. However, brand-name purchases for resale in overseas military commissaries increased from 26,508 hundredweight in 1969-70 to 113,352 in 1971-72.

DISTRIBUTION OF RICE FOR PROCESSING USE

Processing uses (food and beer) took about 37 percent (7,537,400 hundredweight) of all rice distributed in the United States in 1971-72 (table 9). This was about the same percentage as in 1969-70, but 88,700 hundredweight less rice. Rice used for beer decreased from 60.7 percent of rice for all processing uses in 1969-70 to 54.2 percent in 1971-72, a decrease of nearly 550,000 hundredweight. Probably the lack of rice at attractive prices was the underlying reason for the decline in domestic rice used in beer. Imported rice may have offset the decline in domestic rice used for beer.

There was an increase in the quantity of rice used for most processed products. The largest increase was for use in soup. Rice used in package mixes showed a large relative increase of about 50 percent.

DISTRIBUTION OF RICE TO TERRITORIES

Puerto Rico, as in earlier years, accounted for over 90 percent of all territorial shipments of rice in 1971-72. The per capita quantities shipped to the Virgin Islands declined by nearly one-half between 1969-70 and 1971-72. Short grain was still most popular in the territories in 1971-72, accounting for 73 percent of the total (table 10).

EXPORTS

Millers and repackagers reported that 37,754,889 hundredweight of their rice shipments--excluding territorial shipments--went to export markets in 1971-72. 7/ This rice was 61.6 percent long grain, 38.0 percent medium grain, and 0.4 percent short grain. Over one-third was specialty rice. Of all exported rice, 1,087,572 hundredweight was in packages of 5 pounds and less, 257,365 hundredweight was in packages of 5.1 pounds through 25 pounds, and the remainder, or 36,409,952 hundredweight, was in larger packages or bulk.

7/ This figure may differ from the official export figure for this marketing year. Millers' and repackagers' shipments to the export market went mostly to exporters, who in turn may have actually exported more or less than they received.

TABLES

Table		Page
1	Milled rice: Distribution by rice millers, repackagers, and Government, by use, United States, marketing years 1956-57, 1961-62, 1966-67, 1969-70, and 1971-72	7
2	Direct food and processed-food consumption of rice: Annual average consumption, changes, and their couses, for 3-year periods, United States, marketing years 1960-72	8
3	Milled rice: Distribution for direct food use in the United States, by region and order of relative importance, marketing years 1971-72 and 1969-70	9
4	Milled rice: Distribution for direct food use by State, region, and distributor; by size of package and type of grain; and per capita, marketing year August 1, 1971-July 31, 1972	10
5	Milled rice: Distribution for direct food use by region and distributor, by size of package and type of grain, and per capita, marketing years 1969-70 and 1971-72	12
6	Specialty rice distributed by millers and repackagers, by kind and by type of grain, United States and territories, marketing years 1969-70 and 1971-72	13
7	Milled rice: Government distribution to regions of the United States and territories, by outlets, marketing years 1969-70 and 1971-72	14
8	Milled rice: Department of Defense purchases for distribution, marketing years 1969-70 and 1971-72	15
9	Milled rice: Distribution to manufacturers by type of rice and by type of main product processed in United States, marketing years 1969-70 and 1971-72	16
10	Milled rice: Distribution for direct food use by territory and distributor, by size of package and type of grain, and per capita, marketing years 1969-70 and 1971-72	17

Table 1.--Milled rice: Distribution by rice millers, repackagers, and Government, by use, United States, marketing years 1956-57, 1961-62, 1966-67, 1969-70, and 1971-72 1/

Year 2/	Unit	Distribution for--3/				Total
		Direct food use 4/	Processed food use	Total food use	Use by brewers	
1956-57:						
Amount	1,000 cwt.	8,707.7	1,560.6	10,268.3	2,776.4	13,044.7
Percentage of total	Percent	66.7	12.0	78.7	21.3	100.0
1961-62:						
Amount	1,000 cwt.	11,294.8	2,270.5	13,565.3	2,982.4	16,547.7
Percentage of total	Percent	68.3	13.7	82.0	18.0	100.0
1966-67:						
Amount	1,000 cwt.	11,087.0	2,961.1	14,048.1	3,147.5	17,195.6
Percentage of total	Percent	64.5	17.2	81.7	18.3	100.0
1969-70:						
Amount	1,000 cwt.	13,012.8	2,994.9	16,007.7	4,631.2	20,638.9
Percentage of total	Percent	63.1	14.5	77.6	22.4	100.0
1971-72:						
Amount	1,000 cwt.	12,835.8	3,455.3	16,291.1	4,082.0	20,373.1
Percentage of total	Percent	63.0	17.0	80.0	20.0	100.0

1/ For comparison purposes, data for Alaska and Hawaii are included before and after they became States.

2/ Year beginning August 1 and ending July 31.

3/ Does not include rice for military use or rice used for starch, feed, and other miscellaneous purposes.

4/ Includes 565,400 hundredweight in 1956-57, 1,166,200 hundredweight in 1961-62, 765,780 hundredweight in 1966-67, 831,001 hundredweight in 1969-70, and 802,001 hundredweight in 1971-72 distributed from Commodity Credit Corporation stocks to schools, institutions, and welfare agencies.

Source: 1956-57 and 1961-62 from Distribution Patterns of Rice in the United States, U.S. Dept. Agr., ERS-186, July 1964; 1966-67 from Distribution of Rice in the United States, 1966-67, U.S. Dept. Agr., ERS-408, April 1969; 1969-70 from Distribution Patterns for U.S. Rice, 1969-70, U.S. Dept. Agr., ERS-484, May 1972; and 1971-72 from survey.

Table 2.--Direct food and processed-food consumtion of rice: Annual average consumption, changes, and their causes for 3-year periods, United States, marketing years 1960-72

3-year period 1/	Average annual consumption 2/			Change in annual total consumption due to--		
	Per capita	Total	Change over previous 3-year average	Increase in population 3/	Changed per capita consumption: By same population as in previous 3-year average	Changed per capita consumption: By additional population since previous 3-year average 4/
	Pounds	1,000 cwt.				
1960-63	6.7	12,267	2,738	511	2,114	113
1963-66	7.3	13,933	1,666	523	1,096	47
1966-69	7.9	15,467	1,534	438	1,142	36
1969-72 5/	7.1	14,467	-1,000	520	-1,471	-49

1/ Marketing years begin August 1 and end July 31.
2/ Milled grain equivalent of all the food products processed from rice. Does not include rice used for alcoholic beverages.
3/ Assuming same per capita consumtion as in previous 3-year period.
4/ Change in consumption accounted for by assuming the same change in per capita consumption by the increase in population (new population) since the previous period.
5/ Preliminary.

Source: Adapted from Food Grain Statistics Through 1967, and Supplements, U.S. Dept. Agr., Bul. No. 423; and Food Consumption Prices, Expenditures and Supplements, U.S. Dept. Agr., Agr. Econ. Rpt. No. 138.

Table 3.--Milled rice: Distribution for direct food use in the United States, by region and order of relative importance, marketing years 1971-72 and 1969-70 1/

Region 2/	Distribution as percentage of U.S. total		Rank by percentage of U.S. total	
	1971-72	1969-70 3/	1971-72	1969-70
	Percent	Percent	Number	Number
Middle Atlantic	24.2	23.0	1	2
Pacific	21.3	25.2	2	1
South Atlantic	17.7	16.1	3	3
West South Central	14.2	15.0	4	4
East North Central	9.8	8.0	5	5
East South Central	4.9	3.8	6	7
West North Central	3.3	4.6	7	6
New England	3.0	2.7	8	8
Mountain	1.6	1.6	9	9
U.S. total	100.0	100.0	--	--
	Amount distributed per capita		Rank by distribution per capita	
	Pounds	Pounds		
Pacific	10.3	12.5	1	1
West South Central	9.3	10.1	2	2
Middle Atlantic	8.3	8.0	3	3
South Atlantic	7.4	6.9	4	4
East South Central	4.9	3.9	5	5
New England	3.2	2.9	6	7
East North Central	3.1	2.6	7	8
West North Central	2.5	3.6	8	6
Mountain	2.5	2.5	9	9
U.S. total	6.3	6.4	--	--

1/ Includes all rice distributed for direct food use by civilian population, including rice distributed by USDA to schools, institutions, and welfare agencies and apparently includes commercial sales to military commissaries operated within the Nation's borders. Marketing years begin August 1 and end July 31.

2/ See table 4 for the States in each region.

3/ Regional percentages, U.S. total (100 percent), and regional per capita figures do not include a small percentage distributed for which region of destination was not reported. However, the U.S. per capita figure does include that rice.

Source: 1969-70 data from Distribution Patterns for U.S. Rice, 1969-70, U.S. Dept. Agr., ERS-484, and 1971-72 data from survey.

Table 4--Milled rice: Distribution for direct food use by State, region, and distributor; by size of package and type of grain; and per capita, marketing year August 1, 1971 - July 31, 1972

State and region	Quantity distributed							Type of grain 1/			
	By millers and repackagers			By Government 1/	Total 3/	Percentage of U.S. total	Per capita 4/	Long	Medium	Short	Specialty rice 5/
	5 pounds and under	5.1 - 25 pounds	25.1 pounds and over								
	1,000 cwt.					Percent	Pounds	Percent			
Maine	10.9	0.7	0.9	12.8	25.4	0.2	2.5	91.6	8.4	--	42.5
New Hampshire	9.1	1.3	.4	3.2	13.9	.1	1.8	99.4	.6	--	74.6
Vermont	2.6	.3	.2	.6	3.6	6/	.8	100.0	--	--	68.8
Massachusetts	106.8	17.1	63.9	38.7	226.4	1.8	3.9	78.2	20.2	1.6	45.3
Rhode Island	13.0	1.4	2.3	.8	17.5	.2	1.9	100.0	--	--	52.6
Connecticut	64.9	10.9	13.1	3.5	92.4	.7	3.0	89.1	10.9	--	52.8
New England	207.3	31.6	80.8	59.6	379.3	3.0	3.2	83.8	15.3	.9	48.9
New York	839.3	426.0	468.5	14.8	1,748.7	13.6	9.5	75.9	19.0	5.1	19.8
New Jersey	483.6	446.4	58.6	6.8	995.4	7.8	13.7	54.1	45.9	--	16.9
Pennsylvania	258.0	22.4	67.2	11.6	359.3	2.8	3.0	66.0	33.7	.3	31.3
Middle Atlantic	1,581.0	894.8	594.4	33.2	3,103.4	24.2	8.3	67.8	29.3	2.9	20.2
Ohio	145.7	17.0	51.2	8.0	221.9	1.7	2.1	75.7	24.1	.2	35.3
Indiana	36.0	3.0	15.0	11.1	65.0	.5	1.2	74.3	25.7	--	36.3
Illinois	271.7	112.3	278.1	6.1	668.1	5.2	6.0	56.6	42.6	.8	17.5
Michigan	149.6	13.4	62.8	8.6	234.4	1.8	2.6	70.4	29.1	.5	28.6
Wisconsin	52.8	5.4	7.4	9.3	74.9	.6	1.7	77.9	20.5	1.6	45.0
East North Central	655.8	151.1	414.4	42.9	1,264.3	9.8	3.1	64.4	34.9	.7	25.0
Minnesota	57.3	3.9	44.1	5.8	111.1	0.9	2.9	57.8	38.9	3.3	31.2
Iowa	22.7	1.5	1.0	3.0	28.1	.2	1.0	69.1	27.5	3.4	38.8
Missouri	64.8	5.9	86.8	26.9	184.4	1.4	3.9	69.9	30.1	--	21.4
North Dakota	5.5	.4	3.6	2.6	12.0	.1	1.9	66.6	8.5	24.9	34.4
South Dakota	3.1	.5	.1	3.6	7.2	.1	1.1	53.9	46.1	--	40.3
Nebraska	21.0	1.5	2.0	1.0	25.4	.2	1.7	66.1	33.9	--	29.3
Kansas	29.4	4.1	8.6	7.2	49.2	.4	2.2	73.5	26.5	--	26.2
West North Central	203.7	17.7	146.1	50.0	417.4	3.3	2.5	66.3	31.9	1.8	27.0
Delaware	0.3	0.1	0.9	5.8	7.1	0.1	1.3	85.3	14.7	--	25.8
Maryland	102.6	9.3	20.4	5.0	137.3	1.1	3.5	68.8	29.4	1.8	51.6
District of Columbia	60.4	14.3	26.4	1.2	102.3	.8	13.8	94.0	6.0	--	19.1
Virginia	66.1	8.1	13.0	18.2	105.4	.8	2.3	66.0	34.0	--	34.3
West Virginia	10.4	.3	6/	1.6	12.4	.1	.7	95.2	4.8	--	30.6

North Carolina	186.8	25.5	21.1	37.1	270.5	2.1	5.3	83.7	16.3	--	18.9
South Carolina	220.0	161.7	60.6	19.9	462.2	3.6	18.0	69.9	30.1	--	6.7
Georgia	185.1	40.1	59.5	38.0	322.7	2.5	7.0	73.8	26.2	--	14.3
Florida	394.0	143.9	269.1	47.4	854.4	6.6	12.1	94.8	5.1	.1	14.9
South Atlantic	1,225.9	403.3	471.0	174.2	2,274.4	17.7	7.4	82.6	17.2	.2	16.9
Kentucky	21.0	1.3	3.1	8.5	33.8	0.3	1.0	64.2	35.8	--	26.2
Tennessee	67.2	4.4	22.2	9.5	103.3	.8	2.6	62.4	37.6	--	20.5
Alabama	120.7	14.0	69.6	53.6	258.0	2.0	7.4	81.6	18.4	--	10.7
Mississippi	85.1	4.8	116.1	29.8	235.8	1.8	10.5	71.7	28.3	--	5.0
East South Central	294.0	24.4	211.1	101.4	630.9	4.9	4.9	73.5	26.5	--	11.0
Arkansas	49.5	2.5	128.1	4.3	184.4	1.5	9.4	87.6	12.4	--	4.0
Louisiana	302.9	248.8	276.4	55.1	883.2	6.9	24.1	56.1	43.8	.1	2.6
Oklahoma	40.4	2.2	18.5	30.6	91.7	.7	3.5	78.0	21.2	.8	21.6
Texas	341.8	104.4	92.9	118.6	657.7	5.1	5.8	83.5	16.5	6/	22.5
West South Central	734.6	357.9	516.0	208.7	1,817.1	14.2	9.3	69.6	30.3	.1	10.1
Montana	8.2	0.7	0.1	2.5	11.5	0.1	1.6	96.3	--	3.7	39.3
Idaho	8.0	.7	6.2	3.3	18.2	.1	2.4	88.9	8.6	2.5	25.2
Wyoming	.4	.3	.1	.3	1.1	6/	.3	80.7	19.3	--	58.1
Colorado	40.6	5.3	7.4	1.7	55.0	.4	2.4	92.2	6.4	1.4	46.4
New Mexico	5.7	1.1	3.4	4.2	14.4	.1	1.4	87.4	12.6	--	52.1
Arizona	34.7	3.1	14.7	23.7	76.2	.6	4.1	86.0	12.6	1.4	30.2
Utah	9.8	2.3	10.2	2.2	24.6	.2	2.4	84.0	13.7	2.3	32.4
Nevada	.9	2.9	2.3	3.2	9.4	.1	1.8	100.0	--	--	74.2
Mountain	108.3	16.4	44.5	41.2	210.4	1.6	2.5	89.0	9.4	1.6	38.7
Washington	52.5	18.5	52.6	4.7	128.4	1.0	3.8	59.8	23.8	16.4	21.0
Oregon	40.5	7.6	33.1	7.9	89.1	.7	4.1	72.0	16.5	11.5	19.0
California	769.5	377.7	777.8	68.9	1,994.0	15.5	10.0	60.6	33.4	6.0	16.2
Alaska	1.8	1.0	.2	.7	3.8	6/	1.3	100.0	--	--	100.0
Hawaii	20.4	257.3	237.2	8.5	523.4	4.1	69.9	4.8	89.4	5.8	1.0
Pacific	884.8	662.2	1,100.9	90.8	2,738.7	21.3	10.3	50.1	43.3	6.6	13.7
U.S. total	5,895.3	2,559.3	3,579.1	802.0	12,835.8	100.0	6.3	67.3	30.3	2.4	18.1

1/ Does not include rice distributed by Government. 2/ Breakdown of Government distribution by package size was not available. Quantity distributed by Government was compiled by Food Nutrition Service staff and includes only the rice distributed through schools, institutions and welfare and does not include rice distributed to armed forces. 3/ Figures may not add to totals due to rounding. 4/ February 1, 1972, civilian, resident population estimates (interpolated from Bureau of Census estimates) were used in per capita calculations. 5/ Specialty rice includes parboiled, precooked, brown and other than regularly milled rice distributed by mills and repackagers. Percentages are based on total quantities of rice distributed less Government distribution. 6/ Less than 0.1 when rounded.

Source: All except Government distribution data from survey. Government from records of Food and Nutrition Service, U.S. Dept. Agr.

Table 5.--Milled rice: Distribution for direct food use by region and distributor, by size of package and type of grain, and per capita, marketing years 1969-70 and 1971-72 1/

Region and year 2/	Quantity distributed							Type of grain 3/			Specialty rice 8/
	By millers and repackagers			By Government 4/	Total 5/	Percentage of U.S. total 6/	Per capita 7/	Long	Medium	Short	
	5 pounds and under	5.1-25 pounds	25.1 pounds and over								
	1,000 cwt.					Percent	Pounds	Percent			
New England											
1969-70	201.0	46.3	63.5	30.5	341.3	2.7	2.9	83.3	16.7	0	47.5
1971-72	207.3	31.6	80.8	59.6	379.3	3.0	3.2	83.8	15.3	.9	48.9
Middle Atlantic											
1969-70	1,447.1	941.4	471.0	90.9	2,950.5	23.0	8.0	72.0	23.0	5.0	21.1
1971-72	1,581.0	894.8	594.4	33.2	3,103.4	24.2	8.3	67.8	29.3	2.9	20.2
East North Central											
1969-70	603.8	148.4	233.4	36.9	1,022.5	8.0	2.6	64.5	35.3	.2	30.9
1971-72	655.8	151.1	414.4	42.9	1,264.3	9.8	3.1	64.4	34.9	.7	25.0
West North Central											
1969-70	351.8	31.4	156.9	44.6	584.7	4.6	3.6	44.4	55.6	0	19.7
1971-72	203.7	17.7	146.1	50.0	417.4	3.3	2.5	66.3	31.9	1.8	27.0
South Atlantic											
1969-70	1,211.4	414.5	231.4	203.9	2,061.2	16.1	6.9	80.7	19.2	.1	18.8
1971-72	1,225.1	403.3	471.0	174.2	2,274.4	17.7	7.4	82.6	17.2	.2	16.9
East South Central											
1969-70	270.5	35.2	69.4	113.4	488.5	3.8	3.9	72.7	27.0	.3	14.3
1971-72	294.0	24.4	211.1	101.4	630.9	4.9	4.9	73.5	26.5	--	11.0
West South Central											
1969-70	815.9	392.2	520.5	186.3	1,914.9	15.0	10.1	64.0	36.0	9/	15.7
1971-72	734.6	357.9	516.0	208.7	1,817.1	14.2	9.3	69.6	30.3	.1	10.1
Mountain											
1969-70	101.5	21.0	39.1	42.5	204.1	1.6	2.5	85.3	12.3	2.4	36.1
1971-72	108.3	16.4	44.5	41.2	210.4	1.6	2.5	89.0	9.4	1.6	38.7
Pacific											
1969-70	952.2	514.0	1,684.5	82.0	3,232.7	25.2	12.5	35.7	49.9	14.4	9.7
1971-72	884.8	662.2	1,100.9	90.8	2,738.7	21.3	10.3	50.1	43.3	6.6	13.7
U.S. total											
1969-70	6,162.8	2,547.5	3,471.5	831.0	3/13,012.8	100.0	6.4	61.3	33.7	5.0	18.4
1971-72	5,895.3	2,559.3	3,579.1	802.0	12,835.8	100.0	6.3	67.3	30.3	2.4	18.1

1/ August 1--July 31. 2/ For States included in each region, see table 4. 3/ Does not include rice distributed by Government. 4/ Breakdown of Government distribution by package size was not available. Quantity distributed by Government was compiled by Food Nutrition Service staff and includes only the rice distributed through schools, institutions and welfare, does not include rice distribution to armed forces. 5/ Figures may not add down or across to totals due to rounding. In 1969-70 they do not add down mainly because region of destination was not reported for a small percentage of the U.S. total domestic distribution. 6/ Percentage of total for which region of distribution was reported in 1969-70. 7/ February 1, 1970, and February 1, 1972, civilian resident population estimates, based on and interpolated from Bureau of the Census estimates, respectively, were used in per capita calculations. 8/ Specialty rice includes parboiled, precooked, brown and other than regularly milled rice distributed by mills and repackagers. 9/ Less than 0.1 percent when rounded.

Source: All except Government distribution data from survey. Government from records of Food and Nutrition Service, U.S. Dept. Agr.

Table 6.--Specialty rice distributed by millers and repackagers, by kind and by type of grain, United States and territories, marketing years 1969-70 and 1971-72 1/

Year and kind	Type of grain			Total
	Long	Medium	Short	
	1,000 cwt.			
1969-70:				
Parboiled	1,350.1	0	2.4	1,352.5
Precooked 2/	807.5	0	0	807.5
Brown	54.9	9.0	24.0	87.9
Other 3/	25.8	0	0	25.8
Total	2,238.3	9.0	24.4	2,273.7
1971-72:				
Parboiled	1,371.9	0	0.4	1,372.3
Precooked 2/	849.9	0	0	849.9
Brown	50.5	11.0	72.1	133.6
Other 3/	2.9	0	0	2.9
Total	2,275.2	11.0	72.5	2,358.7

1/ Year beginning August 1 and ending July 31.
2/ Includes regular milled rice processed into specialty rice by repackagers. Does not include specialty rice that may have been distributed by Government.
3/ Mostly flavored rice.

Source: Survey.

Table 7.--Milled rice: Government distribution to regions of the United States and territories, by outlets, marketing years 1969-70 and 1971-72

Region 1/	1969-70 2/				1971-72 3/			
	Schools	Institutions	Welfare agencies	Total	Schools	Institutions	Welfare agencies	Total 4/
	1,000 cwt.							
New England	8.2	4.3	18.0	30.5	8.6	4.4	46.6	59.6
Middle Atlantic	23.4	14.5	53.0	90.9	19.9	11.8	1.5	33.2
East North Central	14.8	6.7	15.3	36.9	15.7	9.7	17.6	42.9
West North Central	8.9	3.2	32.6	44.6	10.8	3.6	35.6	50.0
South Atlantic	64.9	12.5	126.5	203.9	62.7	16.9	94.6	174.2
East South Central	23.7	4.5	85.2	113.4	24.1	3.9	73.4	101.4
West South Central	52.8	8.4	125.0	186.3	55.9	12.0	140.8	208.7
Mountain	7.2	1.7	33.6	42.5	8.6	1.8	30.8	41.2
Pacific	28.2	10.7	43.1	82.0	22.8	10.0	57.9	90.8
United States 4/	232.1	66.6	532.3	831.0	228.9	74.2	498.9	802.0
Territories	102.4	8.9	162.9	274.2	86.1	8.9	170.1	265.1
United States and territories 4/	334.6	75.5	695.2	1,105.2	315.0	83.1	669.0	1,067.2

1/ See table 4 for States in each region.
2/ Year beginning August 1 and ending July 31.
3/ Year beginning July 1 and ending June 30.
4/ Figures may not add to totals due to rounding.

Source: 1969-70 from Distribution Patterns for U.S. Rice, 1969-70, U.S. Dept. Agr., ERS-484, May 1972; and 1971-72 from records of Food and Nutrition Service, U.S. Dept. of Agriculture.

Table 8.--Milled rice: Department of Defense purchases for distribution, marketing years 1969-70 and 1971-72 1/

Use and package size	Total quantity	Type of grain			Percentage specialty rice 2/
		Long	Medium	Short	
	Cwt.	Percent	Percent	Percent	Percent
1969-70					
Specification for Armed Forces feeding:	111,694	100	0	0	100
5 pounds and under	0				
Over 5 pounds - 25 pounds	105,214	100	0	0	100
Over 25 pounds	6,480	100	0	0	100
Brand-name for resale in overseas military commissaries: 3/	26,508	38	15	47	38
5 pounds and under	24,181	NA	NA	NA	NA
Over 5 pounds - 25 pounds	2,327	NA	NA	NA	NA
Over 25 pounds	0	--	--	--	--
Direct purchase for overseas indigenous feeding 4/	435,533	67	33	5/	67
Total	573,735	72	26	2	72
1971-72:					
Specification for Armed Forces feeding:	46,292	100	--	--	100
5 pounds and under	0	--	--	--	--
Over 5 pounds - 25 pounds	42,312	100	--	--	100
Over 25 pounds	3,980	100	--	--	100
Brand-name for resale in overseas military commissaries 3/	113,352	NA	NA	NA	100
5 pounds and under	63,726	NA	NA	NA	100
Over 5 pounds - 25 pounds	41,826	NA	NA	NA	100
Over 25 pounds	7,800	NA	NA	NA	100
Direct purchases for overseas indigenous feeding 6/	0	--	--	--	--
Total	159,644	NA	NA	NA	100

NA= Not available.
1/ Year beginning August 1, and ending July 31.
2/ Parboiled and precooked rice
3/ Does not include rice sold in nonmilitary commissaries.
4/ Package size not known.
5/ Less than 0.5 percent.
6/ None purchased for this purpose during this year.

Source: Defense Supply Agency, Headquarters, Defense Support Center records, U.S. Department of Defense.

Table 9.--Milled rice: Distribution to manufacturers by type of rice and by type of main product processed in the United States, marketing years 1969-70 and 1971-72 1/

Marketing year and type of rice	Type of product						Total	Percentage of U.S. total 2/
	Cereal	Soup	Baby food	Package mixes	Beer	Other		
	1,000 cwt.							Percent
1969-70:								
Long grain	6.5	211.0	6.0	299.2	0	3/185.7	708.4	9.3
Medium grain	1,004.3	0	0	0	186.6	4/5.0	1,195.9	15.7
Short grain	854.7	0	0	0	79.9	0	934.6	12.2
Broken	233.9	0	130.1	0	3,170.5	5/58.5	3,593.0	47.1
Mill run	0	0	0	0	846.7	0	846.7	11.1
Brewers	0	0	0	0	347.5	0	347.5	4.6
Total	2,099.4	211.0	136.1	299.2	4,631.2	249.2	7,626.1	100.0
Percent 2/	27.5	2.8	1.8	3.9	60.7	3.3	100.0	--
1971-72:								
Long grain	61.0	645.6	0	387.6	0	18.6	1,112.8	14.8
Medium grain	923.2	0	0	0	112.5	72.0	1,107.7	14.7
Short grain	714.9	0	0	0	357.2	0	1,072.1	14.2
Broken	401.8	0	127.4	0	2,748.9	55.2	3,333.3	44.2
Mill run	0	0	0	0	792.4	0	792.4	10.5
Brewers and screenings	0	0	0	0	71.0	0	71.0	1.0
Flour	1.3	0	13.3	33.5		0	48.1	.6
Total	2,102.2	645.6	140.7	421.1	4,082.0	145.8	7,537.4	100.0
Percent 2/	27.9	8.5	1.9	5.6	54.2	1.9	100.0	--

1/ August 1 - July 31. Data does not include rice purchased from Commodity Credit Corporation, imports, or reduction of stocks, if any were used.

2/ Percentages were computed from unrounded data.

3/ 175,700 hundredweight was seasoned rice, 9,800 was canned rice, and 200 was feed.

4/ Canned rice

5/ 51,500 hundredweight was miscellaneous and 7,000 was flour.

Source: 1969-70 data from Distribution Patterns for U.S. Rice, 1969-70, U.S. Dept. Agr., ERS-484, May 1972 and 1971-72 from survey.

Table 10.--Milled rice: Distribution for direct food use by territory and distributor, by size of package and type of grain, and per capita, marketing years 1969-70 and 1971-72 1/

Year and territory	Quantity distributed 2/					Percentage of total	Per capita 4/	Type of grain 5/			Specialty rice 6/
	By millers and repackagers: 5 lb. and under	5.1-25 lb.	25.1 lb. and over	By Government 3/	Total			Long	Medium	Short	
	1,000 cwt.					Percent	Pounds	Percent			
1969-70:											
Puerto Rico	2,021.6	532.4	764.1	241.1	3,559.1	94.1	127.5	1.2	18.3	80.5	.6
Virgin Islands	24.4	15.0	35.0	2.5	76.9	2.1	122.1	28.8	9.4	61.8	25.9
Guam	2.2	6.6	105.1	1.7	115.6	3.1	132.9	7/	86.0	14.0	7/
American Samoa	0	0	0	.9	.9	7/	3.2	0	0	0	0
Other	0	0	0	28.1	28.1	.7	7/	0	0	0	0
Total	2,048.3	554.0	904.2	274.2	3,780.7	100.0	124.3	1.8	20.3	77.9	1.1
1971-72:											
Puerto Rico	1,933.9	563.1	1,113.6	233.6	3,844.3	94.1	138.1	2.1	22.3	75.6	.6
Virgin Islands	29.0	8.7	3.3	2.5	43.5	1.1	65.0	71.3		28.7	55.9
Guam	2.1	50.1	114.7	1.5	168.4	4.1	183.0	6.6	64.9	28.5	0
American Samoa	7/	0	0	.8	.8	7/	2.7	100.0	0	0	0
Other 8/	0	0	0	26.8	26.8	.7	16.2	0	0	0	0
Total	1,965.0	622.0	1,231.7	265.1	4,083.8	100.0	130.2	3.1	23.9	73.0	1.2

1/ Includes all rice distributed for direct food use by civilian population, year August 1 - July 31.
2/ Figures may not add to totals due to rounding.
3/ Compiled by Food and Nutrition Service. Includes rice distributed by USDA to schools, institutions, and welfare. Does not include rice distributed to U.S. Armed Forces.
4/ The Feb. 1, 1970 and 1972 estimated civilian population figures interpolated from Bureau of Census estimates, were used in per capita calculations.
5/ Does not include rice distributed by Government.
6/ Includes parboiled, precooked, brown and other than regularly milled rice distributed by mills and repackagers. Percentages are based on total quantities of rice distributed less Government distribution.
7/ Rounded to less than .1.
8/ Trust territories (the Marshall, Marianna, Caroline, and Wake Islands).

Source: Survey data collected for the respective years and Government from records of Food and Nutrition Service, U.S. Dept. of Agriculture.

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101
FIRST CLASS

U.S.MAIL